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SOME POINTS IN THE PATHOLOGY OF TUBERCLE.

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IN attempting to put together some thoughts on the pathology of tubercle, it will be necessary, however briefly, to refer to the unsettled state of the question in the best medical minds of the day. Immediately following Laennec, nothing could have appeared more firmly fixed than the doctrine he so clearly enunciated. It was impossible to doubt tuberculosis as a specific disease. To have misgivings as to the nature of consumption and its constant association with tubercular destruction was to appear to return to barbaric darkness. Not to separate with clearness the different forms of tubercle was to forfeit all claim to be a pathologist. But we all know what has recently happened. The German iconoclast has been at work. Nobody likes to speak now of tubercular diathesis, of tubercle being a constitutional affection. It is for the most part simply the result of a local inflammation; and cheesy matter, infective process from absorption, irritation in structures abounding in lymphatic tissues, are the complacent phrases of the day, which satisfy most as much now as diathesis, constitutional condition, specific deposit, satisfied most not many years since.

And the local view, if such it may be called, once adopted, has brought with it scores of interesting observations on the inoculation of tubercle; its artificial causation; its production in the lung by inhalation of both tubercular and non-tubercular substances,—observations which are warmly discussed, criticised, adopted, rejected, explained, explained away, and the uncertainties connected with which, quite apart from the other difficulties of the subject, are the cause mainly of the generally disturbed condition of the whole inquiry.

Underlying these observations, or at least closely connected with them, lies the vital question, What relation does tubercle bear to the inflammation? And it is this question particularly that I desire to examine with you a little more fully to-night, and concerning which I shall venture to offer the result of some researches and reflections.

As a necessary introduction, I shall have to examine the evidence on which we pronounce a mass to be tubercular; in other words, what its minute structure as shown by the microscope is. And, to avoid any confusion at the threshold of our inquiry, let me speak of that which we find in undoubted tubercle, in the little, hard, miliary bodies, which may afterwards become aggregated into larger, gray masses. In them we encounter three elements:

Medium-sized, rather shrivelled cells; not very regular in outline, consisting of finely-granular, dense material, with a nucleus small in proportion to the cells, or with several nuclei of similar character. They were once regarded as significant of tubercle, but they are now supposed to be swollen epithelial cells which have undergone retrograde metamorphosis. Mixed up with them are cells less dense and like ordinary epithelium, small cells like leucocytes, and a great deal of granular material of doubtful origin.

Giant cells. These consist of large, many-nucleated cells, which are found at rather an advanced stage of tuberculosis, and are very marked in the acute form. They are of spheroidal shape, and somewhat irregular outline. Great stress has been laid on them as significant of tubercle, but they have been met with in deposits in various tissues of the body, in scrofula, in syphilis, and in merely hyperplasic lymph-glands of those perfectly free from tubercle.* As they grow they send out long, branched processes. With Klein, I believe them to be excessively developed or fused epithelial cells.

The structure in which all these cellular elements are found, especially, perhaps, those last described, is *a fine net-work* like the fine trabecular net-work in the interior of lymphatic glands; and this led to the belief entertained until recently by Rindfleisch, that tubercle is a lymphoid growth. But this is not stating the whole of the manner and arrangement of the cells in tubercle. They are found in the lungs filling the alveoli and infiltrating—gener-

* Weiss, Virchow's Archiv, lxviii.

ally as small, round cells—the alveolar walls, and leading to very considerable thickening of the latter.

To sum up, cell-growths by themselves, not peculiar, but representing different grades of development,—some still rapidly growing, others shrivelling and full of dense matter; all capable of being washed out of a fine reticulum, or accumulating in masses both within and in the walls of air-vesicles,—this structure, this grouping, may be regarded as tubercle. Then there are certain secondary alterations that take place in the tubercular formation and the invaded tissue which must also be mentioned, and which bespeak a retrograde change and low vitality. The main of these changes is a degeneration of the cell-growths, an accumulation of granules and fatty material, and an occlusion of the pulmonary capillaries, probably from pressure, and here and there a fibroid transformation of the giant cells.

Now, what causes all this? Some still maintain a specific non-inflammatory deposit; some say an inflammatory process of slight intensity; others a specific inflammation. I pick up a recent journal, and see that malaria is at the bottom of all this strange cell-growth and rapid decay. I turn to one of this month, and I find in the front of the periodical an article proving that tubercle has its origin in disorders in the trophic centres, and in the middle pages another, showing that it is an accident, the result of the capillary interference, due to altered condition of the blood from the presence of yeast. It is almost needless to say that the bacteria are made to explain the peculiar formations, for how could these patient little beings that are bearing so quietly being made the scapegoats of the pathologists of the last half of the nineteenth century escape having charged to them this additional sin? I turn with eagerness to discussions of the subject replete with learning in societies similar to ours, and there is little but negation. It is not this, and not that, say men who are known wherever medicine is cultivated; and you begin to doubt if there is such a thing as tubercle at all, until the first clinic-room you go into—and see the familiar face, hear the cough, and recognize the well-known signs—confronts you with the stern reality of the awful disease. With all these doubts and gropings after the truth, I may be pardoned if I hold fast to the belief that the process, whatever it be, is something special, though something of which we do not hold the key.

To return from this digression to one part of the subject around which much of what is positive in our knowledge has clustered, and which is of most obvious applicability,—the relation of these mysterious tubercular formations to inflammation.

Now, we all know how the relation of tubercle to inflammation has engaged the attention of the present generation of pathologists. Yet the consideration of the question long antedated them; and the much-neglected observations of that sagacious thinker, Addison, are really the keynote to many of the views now brought forward under other names. But this is a historical issue, with which we cannot further concern ourselves here. The active discussion of the matter started with the observation of Virchow that the caseous matter previously regarded as infiltrated tubercle might originate from the fatty degeneration of diverse morbid products, and was non-tubercular; indeed, that the gray granulations alone were tubercular and non-inflammatory. Niemeyer expanded this thought, and engrafting on it the doctrine of Buhl, of the infection of tubercle, promulgated the view that the lung consolidation and destruction were most commonly inflammatory, — the result of the caseous pneumonia,—and the tubercle, when met with, quite secondary and accidental. Indeed, to carry out Niemeyer's ideas logically, the inflammation is, in the vast majority of instances, everything, the tubercle nothing.

The doctrine of Buhl has been alluded to, that tuberculosis—as seen, for instance, in its most typical form of miliary tubercle —is due to infection from masses of cheesy material. The infection happens chiefly through the lymphatics. This infection theory led to numerous experiments on animals, with the result that inoculation in rabbits and guinea-pigs with fresh miliary tubercle, with cheesy matter, with the sputa from tubercular patients, has been followed by acute miliary tuberculosis. Moreover, going still further, Cohnheim and Fraenkel have shown that it is unnecessary to inoculate with these special matters, for in rabbits and guinea-pigs the formation of any focus of suppurative inflammation may fill the viscera with tubercles.

With reference to these experiments, it has been pointed out that the kind of animal on which they are made has much to do with the result. Rabbits and guinea-pigs are particularly prone to tuberculosis. Yet, as regards inoculation with tubercular matter, it has also succeeded on other animals, as in the experiments of Böllinger on goats.*

Another group of experiments must be alluded to,—those in which pulverized tubercle and cheesy matter have been forced into the lung by inhalation. These have been followed by tubercular-looking nodules; and so have, as Schottelius† has recently demonstrated, inhalations with non-tubercular substances, such as pulverized calf's brain and cheese, produced apparently identical bodies. They are the result of inflammatory irritation. But, microscopically examined, they do not present the appearances of tubercle.

Summing up all the experimental observations, they seem to me to prove that tubercle may be transmitted by inoculation either of true tubercular matter or so-called caseous pneumonia; that resorption of tubercle and infection of previously healthy parts is a view sustained by evidence; that the production of tubercle from non-tubercular material, either by inoculation or by inhalation, is not proved. Inflammatory nodules arise, but they have not the structure of tubercular formations.

I shall now attempt to answer the question what is the exact nature of those inflammatory changes in the lung which give rise to destructive consolidation, supposed to be non-tubercular, yet from which, by infection, tubercle may come. In other words, I shall endeavor to describe the histology of so-called "caseous pneumonia," or pneumonic phthisis. We find within the alveoli an accumulation of large cellular elements, mixed with leucocytes and exudation matter. We observe the alveolar walls thickened and infiltrated with cells, the vessels compressed, accounting for the breaking down of the bloodless masses accumulated in and around the alveoli. We meet with inflammatory infiltration in the walls of the bronchi, and, as Rindfleisch has so well pointed out, around them, as well as with increased connective tissue between the lobules and around the finer bronchial tubes. In studying the cellular masses we encounter the so-called giant cells. There is, indeed, nothing we do not find in this caseous pneumonia that we have not spoken of in tubercle, only the proportions are different and the admixture of the elements of inflammation more marked. These changes spread usually over a large portion of the lung, and, especially as regards the amount of connective tissue, are modified by the duration of the disease. One of the most striking of the lesions, and one which I have rarely failed to encounter in the many specimens examined, is the infiltration with small cells of the walls of the alveoli. Green,‡ too, regards them as very important, and Wilson Fox§ looks upon them even as tubercular. As the cheesy matter degenerates, evidences of broken-down tissue, with considerable granular detritus, meet the eye. Yet Cohnheim‖ has recently told us that the cheesy part contains in reality but little fat.

Now, is there anything in all this which broadly separates this so-called caseous pneumonia in its minute structure from tubercle? Is there anything more than the evident admixture of a marked inflammatory lesion? Is there anything in the low vitality of the mass and its tendency to decay and fall asunder which is different? And if we call this affection at once "tubercular pneumonia," we are, I verily believe, much nearer to the truth than in endeavoring to separate it from tubercle altogether.

But it is not simply on histological grounds that I arrive at this conclusion. I have long studied the subject clinically, and I can record it here as my deliberate opinion that the number of cases of consumption which are supposed to have inflammatory beginnings is grossly exaggerated. They are the exception, not the rule; and even in the cases in which we have had evidence of an active bronchitis or pneumonic condition having seemingly been the start of all the difficulty, how often do we not find, on close analysis, that failing health, hacking cough, even slight spitting of blood, have preceded the acute symptoms? Then, too, we may get the history of inherited scrofulous or

* Mittheilungen aus dem Pathologischen Institute zu München, 1878.
† Virchow's Archiv, lxxiii., 1878.
‡ Pathology of Pulmonary Consumption, 1878.
§ Transactions of Pathological Society of London, 1873.
‖ Die Tuberkulose vom Standpunkte der Infektionslehre, 1879.

tuberculous diathesis. But I do not wish to be misunderstood. There are cases in which none of these qualifying elements can be discerned, which have, to all appearance, started in an acute inflammatory process. It is only the relative frequency of these cases that I am denying.

Again, I ask, what becomes of the instances of so-called pneumonic phthisis? Do they not become tubercular? How many autopsies can any one recall, where persons dying from some intercurrent affection, while laboring under so-called pneumonic phthisis, did not show at some portion of the lung, or in the other lung, miliary tubercle or larger masses which everybody would pronounce undoubted tubercle?

Now, admitting the connection of so-called "caseous pneumonia" or "pneumonic phthisis" with the subsequent development of tubercle,—and nobody denies this, whatever his views as to the character of the connection,—I believe that it is quite as logical to reason from the after-appearance of the tubercle as to the primary character of the so-called inflammation, as to reason from the inflammation and the absorption of its products to the formation of the tubercle. The reasoning backward is as good as the reasoning forward, and, I think, infinitely more likely to be true.

Again, how many cases of ordinary pneumonia happening in perfectly healthy persons are met with which pass, no matter how, into tubercle? Certainly not many. When it occurs there is generally the history of scrofula or tubercle in the family, the taint. Many of the advocates of the inflammatory origin of tubercle, or of its subsequent development after inflammation, tacitly admit this when they speak of the inflammation as special or specific. If it is special or specific, I say at once it is tubercular,—tubercular either from the onset, or it has become so when it presents the appearance of caseous changes.

I am advocating, then, the view that caseous pneumonia leads to tubercle elsewhere, because it is really tubercle already; and that it is not the products of ordinary inflammation, but the tubercular products, which infect. They may appear with the inflammation or be the result of a special kind of inflammation; that does not affect my argument.

Now, one great difficulty in admitting this argument is, that since the researches of Virchow have familiarized us with the facts we cannot assume all kinds of caseous degeneration as tubercular. We know that such changes may happen in purulent collections, in cancer, and that, microscopically, they present the features of the so-called cheesy degeneration which attends pneumonic phthisis. But is there nowhere else similarity of appearance without identity of meaning? Can we tell every case of cancer, under all circumstances, by its cell-growth alone? Are there no healthy textures in the course of formation that look like it? Does every sarcoma present infallible features at all its stages? Moreover, I have already stated that we very generally, nay, almost constantly, find in the pneumonic lesion much the same elements, mixed with the products of degeneration, which we recognize as tubercular in undoubted tubercle.

I believe, then, that pneumonic phthisis is a tubercular pneumonia, and that the inflammation is tubercular from the onset, or has acquired a tubercular nature by changes in the cell-life which we do not understand. Perhaps these are connected with sluggish tissue-change under the influence of a virus,—a taint inborn, or acquired by impure air and bad hygienic surroundings. That we cannot see these things in the protoplasm or cells with even our highest powers is no proof of their non-existence. Do we perceive the manly form of the athlete in the little spermatozoon? What do we find in the ovum to explain the transmission of the delicate features and matchless figure of one generation to the famed beauty of another? Where are, in either germs, the lurking tendencies to disease which we see constantly reproduced in families? Where the specks that indicate cancer, scrofula, tubercle, gout?

The tubercular inflammation may appear as such, and then we have a more or less acute character of case; or the tubercular action may not start for years afterwards. I shall show you some drawings taken from cases that I had watched for years.

Here is one from a woman of 45, who, under my observation, had for eight years a chronically-consolidated lung, non-tubercular. Sorrow overtook her, her general health failed; struggles with poverty came, and she became tubercular. You

perceive here how the lower lobe of one lung had undergone the caseous change and contained tubercles, while the upper is simply dark with pigment and densely consolidated. A few scattered, comparatively recent miliary tubercles are found in the other lung.

Here is a yet more striking instance, where a man had for five years a lung which, you see, looks exactly like the red hepatization of ordinary pneumonia. Softening, without a vestige of tubercle, is occurring in parts. In a streak at the upper lobe tubercular pneumonia is evident; the other lung is entirely healthy.

Perhaps the views here advocated may appear to call in doubt the transmission of tubercle by resorption and infection,—its constant reproduction, as it were, and scattering through the system. But they do not. These observations are among the best sustained and most valuable in modern pathology, and they are all the easier to understand if we admit the starting-point of the infection to have been a tubercular inflammation. As a contribution to this doctrine of infection and absorption, and also as furnishing many points of analogy with the instances mentioned where inflammation of the lung has been followed by tubercular formations, let me show the remarkable specimens of abdominal tumors and tuberculosis on the table, taken from cases of mine that happened some years since at the Pennsylvania Hospital.

In the first case, occurring in a man the subject of syphilis, and much tormented with abdominal pains, a hard tumor was discovered in the right iliac fossa. This was followed, after some months, by marked emaciation, sweats, diffused abdominal tenderness, diarrhœa, and signs of deposit in the lungs. At the autopsy the mass you see here of dense fibrous tissue was found in the right iliac fossa, below the head of the colon; a small cavity containing pus was detected in its interior; on its exterior were tubercular nodules. The intestines, on their peritoneal surface, throughout their length were thickly studded with tubercular nodules; the mesenteric glands were enlarged and softened; there were miliary tubercles in the lungs.

In the second case, a man also broken down by syphilis, there was the same history of colics and cramps, and a tumor was discovered in the right iliac fossa, three inches from the crest of the ilium. He had noticed the tumor for years. Gastric irritability, tenderness over the abdomen, ascites, diarrhœa, fever, cough, signs of lung-consolidation, became gradually prominent symptoms, and he died exhausted. A thick, firm mass of inflammatory matter was found covering the cæcum, and had occasioned the tumor. At one part, on the outer and lower wall of the cæcum, was a small cavity containing gelatinoid matter mixed with black, thin fluid. The ileum above the ileo-cæcal valve, as well as the inflammatory, hard tissue in this region, was covered with tubercles. The kidneys contained tubercles; in the left supra-renal capsules were several tubercular nodules. The lungs were full of small, gray, tubercular granulations.

Here, then, are two cases of strange similarity, in which a local inflammation in the abdomen was followed in time by diffused tubercle, both abdominal and pulmonary. But let us return to what I more particularly meant to discuss,—the formation of tubercle in the lungs, and its bearing on the different kinds of phthisis, especially pneumonic phthisis.

Will the views which I have endeavored to bring before you do away with the clinical distinctions concerning which we hear now so much? Not at all. If the so-called pneumonic phthisis has a separate history, gives points for special diagnosis and prognosis, requires different treatment, it ought, no matter what our views of its real pathology, to be recognized as a distinct form. But let us go no further; we are leaving the broad highway for rough and tortuous paths when, as is the tendency of the present day, we attempt to sweep all cases of lung-destruction into the phthisical category.

What do we gain by reverting to a very old nomenclature, and by making phthisis a generic term? To carry this out, we ought even to abolish the word cancer, and speak of it as cancerous phthisis, for surely there is also destruction of the lung enough in pulmonary cancer. The consequence of all this agitation about the word is nothing but confusion. Scarcely two persons seem to use phthisis in the same sense. There are forms of lung-destruction which are clearly non-tubercular; let us give them their special names,

and not apply to them a term which has long been applied to that by far most common form of lung-destruction,—phthisis from tubercle. Pneumonic phthisis may be made a separate variety; but that ought to be all. Nay, I venture to suggest whether, in view of the idea long associated with the name of phthisis, and of what I still humbly believe is beyond comparison the most frequent cause of the consumption, it will not be better, unless some other form is particularized, still to retain the name for the tubercular malady, and to so understand it.

But I have claimed your indulgence long enough, and, in bringing these remarks to a close, I can only hope that some train of thought may have been suggested by them which your labors will brilliantly elucidate. *E scintilla lux;* from the flickering glimmer of to-night I trust through others for the steady glow on a subject that sadly needs light.

DIPHTHERIA—SOME CASES HAVING A BEARING UPON ITS METHOD OF PROPAGATION.

BY J. HOWARD MORGAN, M.D.,

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IN the second and third weeks of December, 1874, in a brown-stone house on the south side of East Fifty-fifth Street, between First and Second Avenues, diphtheria attacked the five children of Mr. M., occupying the first floor and basement, and speedily proved fatal to three of the number.

Immediately after the first death, Mr. and Mrs. B., occupying the second floor and part of the third, became alarmed for their four children, and, acting under advice, moved them, and soon followed themselves, to the residence of Mr. B.'s father, in West Fifty-third Street. In all the rooms thus vacated carbolic acid as a disinfectant was freely placed, and thorough ventilation was had by keeping the windows open at both top and bottom. The Board of Health had the house examined, and found some defects in the sewage-pipes, which were remedied, and vent-pipes run up to the roof.

These changes having been made, and Mr. M.'s surviving children having recovered except from paretic sequelæ, Mr. B.'s family returned to the house in the second week of January, 1875. In the evening of January 15, Lulu B. complained of slight headache, and was feverish. When I saw her next morning, the pulse was 124 per minute, the tonsils and vicinity were congested, lymphatic glands at angles of jaw swollen and tender, as also the parotid glands, so that the face appeared slightly broadened, and there was slight pain on opening the mouth wide. January 17, pulse 136 and glands about as before, but otherwise she seemed better. Under a simple anti-fever mixture and the use of chlorate of potassium, both internally and as a gargle every hour, these symptoms completely subsided in two or three days without there having been any appearance whatever of diphtheritic spots in the throat.

All the children were carefully kept from Mr. M.'s apartments until March 10, when Mrs. B. permitted Lulu and Willie B., aged respectively $4\frac{5}{12}$ and $2\frac{3}{12}$ years, to go down and play with Mr. M.'s children (who were still suffering somewhat from paresis) in the room where they had been sick. This visit was repeated the next day, March 11. Sunday afternoon, March 14, Lulu B. (a bright, strumous child) became feverish and had some nasal catarrh. At 10 A.M., March 15, the pulse was 140, the axillary temperature 104.4° F.; there was a considerable thick, mucous discharge from the nostrils; the velum, uvula, tonsils, and posterior wall of pharynx were congested, and on both tonsils and immediately behind the left tonsil were whitish spots; the cervical glands at the angles of the jaw were swollen and tender, especially on the left side. At 8 P.M., pulse 160, temperature 104.3° F.; spots in throat about the same; swelling and tenderness of glands more decided. March 16, 12.30 P.M., pulse 122, temperature 99.6° F.; specially marked swelling over left angle of jaw and side of neck; nostrils freer, but discharged much mucus and muco-purulent matter; diphtheritic patches on both tonsils, immediately behind the left tonsil, and on velum and uvula. Later in the afternoon vomiting (which had occurred a few times on the 15th) became so prominent a symptom that no medicine and scarcely any nourishment could be retained in the stomach.

March 17, pulse 128, temperature 100.8° F.; the swelling over angles of jaw and sides of neck increased greatly during the

day, and symptoms of septicæmia became manifest. She rapidly failed, and died quietly at 2.35 A.M., March 18.

The irritability of stomach in this case was from the first so marked and so persistent that only local remedies could be depended on,—*e.g.*, syringing the nostrils with a solution of chlorate of potassium and carbolic acid in alcohol and water, frequent brushing of the throat with a mixture of liq. ferri subsulph. and glycerin, and giving bits of ice by the mouth. Quinine and beef-tea were given per rectum. Another point of interest ought not to be omitted. Summoned suddenly five or six hours before her death, I found her respiration very faint, slow, and irregular, the pulse fluttering, eyes fixed, and everything looking as if life could last but a few minutes. Happening to have a solution of atropia with me, I injected hypodermically about gr. $\frac{1}{200}$. In about ten minutes the respirations began to be deeper, more frequent, and regular; the pulse became stronger. She soon roused sufficiently to notice those about her and to answer some questions, and took some brandy and water. This very manifest improvement lasted nearly three hours. Then the pulse and respirations began to fail again. A repetition of the hypodermic in a little smaller dose was followed by a similar improvement, which lasted, however, less than two hours, and it then soon became evident she was passing beyond the reach of remedies.

March 15, in the afternoon, Willie B. began to complain, and at 8 P.M. had much nasal catarrh, congestion of throat, with small whitish spots in pharynx and on tonsils; pulse 150; temperature 102.4° F. March 16, membrane formed on tonsils and adjacent surface; cervical glands enlarged and tender. March 17, membrane thicker and somewhat more extended on surface adjacent to tonsils. March 18, 12 M., pulse 140, temperature 102.3° F.; Dr. J. Lewis Smith called in consultation. March 19, 11.30 A.M., temperature 100.4°; 7.30 P.M., pulse 116, temperature 100.5°. March 20, 12 M., temperature 101.1°; 8.45 P.M., pulse 116, temperature 100.5°. March 21, 1.30 P.M., pulse 124, temperature 99.4°. March 22, 8 A.M., pulse 105, temperature 98.9°; 9 P.M., temperature 98.2°.

I omitted to make a note when the membrane disappeared, but believe it was on March 23. There were no complications, no albumen in urine, no symptoms of laryngeal obstruction or of blood-poisoning, nor any sequelæ. The recovery was rapid.

The treatment mainly consisted in brushing the throat every two hours with a mixture of liq ferri subsulph., three parts, and glycerin, five parts; syringing the nostrils every three or four hours, at first with the solution, as in the preceding case, but afterwards, at Dr. Smith's suggestion, with the above mixture of iron and glycerin somewhat diluted; and giving internally tinct. ferri chloridi, ℥vj, and quiniæ sulph., gr. iss, in glycerin and water every two hours, so as to alternate with the throat-brushing; chlorate of potass. was also frequently given at the intervening half-hours.

March 18, the child's aunt, aged 25 years, came over from West Fifty-third Street and took the principal care of him through the day and night, returning home on the morning of the 19th. On Saturday, the 20th, she came again to pass the night with him, and remained until after the funeral of Lulu B., on Sunday afternoon. During Saturday night she was quite chilly; by Sunday noon felt feverish and had a flushed face. During the afternoon she complained some of pain on swallowing; in the evening this was more annoying, and the tonsils and vicinity were quite red and looked suspicious. Monday morning (March 22) diphtheritic patches were visible on left tonsil and on posterior wall of pharynx, and by noon she had a raging headache, fever (pulse 124, temperature 102.5°), sharp, sticking pain on swallowing, slight swelling and marked tenderness of cervical glands, pain in back and limbs, and great restlessness. 8 P.M., pulse 108, temperature 102°; March 23, 6 A.M., pulse 94, temperature 100°. At 1 P.M., pulse 110, temperature 102.2°; membrane had extended so as to cover almost the entire left tonsil; there was a small patch on the *right* side of the posterior pharyngeal wall, and a faint veil on the right tonsil and the uvula; fever was treated by wet sheets. 10 P.M., pulse 96, temperature 99.7°.

March 24, 7 A.M., pulse 87, temperature 99.1°; 2.45 P.M., pulse 94, temperature 99.9°; no headache; diphtheritic membrane less extensive; 11 P.M., pulse 84, temperature 98.3°. On Thursday, March 25 (6 A.M., pulse 82, temperature 98.4°),

the membrane disappeared, and she progressed favorably till the afternoon of March 29, when she was suddenly attacked with very severe neuralgic pain in right side of thorax. Relieved by hypodermic injection of Magendie's solution of morphia, it returned when the morphia influence began to wear away, and was again relieved for a considerably longer period by combining sulph. atropia with the morphia. In the next two or three days this pain, from being shifting now here now there, became located so persistently in the infra-axillary region and so continuous that pleurisy was feared, and poultices and, at Dr. H. T. Hank's suggestion, dry-cups were applied. But in two days more the pain shifted to the left side, and became distinctly intermittent, coming on at certain hours with considerable regularity. Under careful and timely use of hypodermic injections these attacks of pain—which were most intensely severe—became less and less frequent, and finally ceased, April 9. Subsequently she was troubled for a day or two with myalgia in the muscles of right side of neck and right shoulder.

The treatment for diphtheria consisted in giving tinct. ferri chlor. ♏x in glycerin and water, āā ʒss, every hour until the membrane disappeared, injecting it by means of a glass syringe directly against the diseased surfaces, and allowing it to be swallowed. It should be added that this aunt had long been subject to chronic follicular pharyngitis.

The servant-girl, who was much with Willie B. during his illness and was subject to sore throat, had, as he was recovering, some pharyngitis and tonsillitis, but no diphtheritic appearances.

All the members of the family were directed to use chlorate of potass. gargles freely upon the slightest appearance of irritation.

While the aunt was sickest, her mother (who also had been over to East Fifty-fifth Street to help what she could, and was greatly worn by anxiety) began to have sore throat, and two or three whitish spots appeared on one tonsil, but all speedily disappeared under the use of a chlorate of potass. and carbolic-acid gargle.

In these cases the following points seem worthy of note, viz.:

1st. The tenacity with which the diphtheritic poison clings to apartments, as instanced in Lulu and Willie B. taking the disease after playing in the room where Mr. M.'s children had been sick over two and a half months before.

2d. Under the same external influences we have occurring cases of diphtheria, pharyngitis, and tonsillitis.

3d. The incubation in the diphtheria cases was,—in Lulu B., three or four days; in Willie B., four or five days; and in the aunt, between two and three days.

4th. The aunt, in whom the incubation was shortest, was subject to chronic pharyngitis.

5th. The temperature in each case rose to its highest point within the first twenty-four hours, and thence more or less rapidly fell off. The temperature record in the second case is, however, wanting on the second and third days.

6th. Neuralgia may be a sequela to diphtheria, an observation I have not seen noted elsewhere.

7th. The power of atropia to revive the failing respiration and pulse in a state of collapse.

BILATERAL PARALYSIS OF THE GLOTTIS-OPENERS.

BY REINHARD H. WEBER, M.D.

THE physician acquainted with the physiology of the larynx will at once comprehend the danger to life arising from paralysis of the musculi crico-arytenoidei postici, whose functions as openers of the glottis are so essential to life.

The writer of this prefers the term *openers* of the glottis to the term relaxers of the glottis, as he has found these muscles named in a recent English work on diseases of the throat (Browne), as the term *openers* of the glottis will impress at once the importance of their functions, and at the same time convey much sooner to the mind the proper idea of an active contraction than the term *relaxers* would do.

For my purpose it will be enough to remind my readers of the physiological fact that at every sound uttered by us the glottis is nearly closed by the musculi crico-arytenoidei *laterales*,—the *antagonists* to the above-named openers of the glottis,—and that for each inspiration the vocal cords must be actively separated by the action of these openers upon the ary-

tenoid cartilages, which latter must be rotated outward and backward by them, producing in this way the large and diamond-shaped opening of the glottis, as we see it at each normal inspiration. If, now, the functions of these openers are not performed, the glottis remains but a narrow slit, and upon forcible inspiratory efforts this slit will become still more narrow, by the excess of the external atmospheric pressure over that of the air contained in the trachea, rarefied by the expansion of the thorax. If expiration now follows, the glottis will return to its original size, and expiration is little interfered with. In complete bilateral paralysis of the openers of the glottis, there is therefore established "*a true stenosis of the glottis of the highest grade, with danger of asphyxia.*"—Ziemssen, vol. vii. p. 959.

According to the great authority just cited, our knowledge of this important lesion dates only from the year 1862, when the first case was published by Gehrhard, and, as Ziemssen himself has been able to collect nine cases only (all doubtful ones being excluded), I consider it my duty to publish the following case, which has come under my observation:

On April 24 I was called to see Mr. M., tailor and musician, aged 37 years, and the following history was communicated to me by his wife:

Mr. M. has often had attacks of hoarseness for many winters past, lasting only a few weeks; but in the last two years his hoarseness has increased and become permanent. Four months ago, cough, night-sweats, and loss of flesh had set in and become more and more decided. Since the day before yesterday a constantly increasing dyspnœa had alarmed him very much, as it prevented him from lying down, so that he had been obliged to pass the last two nights sitting upright in his chair.

Nothing in his history pointing to syphilitic contamination could be elicited. Physical examination of his chest revealed cavernous breathing in both apices of the lungs, with quite distinct cracked-pot sound on percussion. The rest of his lungs appeared to be in an almost normal condition. The difficulty in his breathing, which was evidently only active during inspiration, caused a loud crowing noise similar to that often heard in whooping-cough or during an attack of laryngismus stridulus, while his expiration was comparatively noiseless. These facts induced me at once to make a laryngoscopic examination. This showed great redness of the epiglottis, as well as of all the mucous membrane of the larynx visible, though no marked swelling or œdema of the glottis; but there was hardly any separation of the vocal cords during inspiration, the glottis remaining but a narrow slit hardly one line wide, and the greater the patient's inspiratory efforts, the smaller the slit became. On making him sound a vowel, the glottis closed perfectly, with the effect of perceptibly increasing his dyspnœa for several minutes. There could be no doubt now about the diagnosis,—b lateral paralysis of the musculi crico arytenoidei postici.

The patient was then told that tracheotomy was the only measure from which he could expect relief, and that no medicines could alleviate his dyspnœa. As he could not make up his mind as yet to submit to so serious an operation, he preferred to wait, and promised to send for me in case he should be threatened with suffocation.

Five days later (on the 29th of April) I received a message, early in the morning, to come as speedily as possible, as the patient now wished the operation to be performed. On my arrival I found him still sitting in the chair, which he had not been able to leave now for seven nights, and with his dyspnœa so much increased that every inspiration was accompanied by a howling sound. This loud noise made an accurate examination of his lungs impossible, but enough was heard to make certain the diagnosis of commencing pulmonary œdema, in consequence of the long-continued and constantly increasing rarefaction of the air in his lungs. His face and lips were cyanotic, his pulse weak and frequent; his respirations were thirty five in the minute. A laryngoscopic examination revealed the same state of the larynx as at the former examination, only a little more swelling of the parts, but the slit of the glottis still more narrow during inspiration. I now performed crico-tracheotomy upon him, being assisted by Drs. Joseph Thoerper and Gustav Biver, of this city; but an operation surrounded by so many difficulties will, happily, not often fall to our lot. First, the patient was not able to bear the anæsthetic, his pulse almost disappearing after a few inhalations of chloroform. It was then necessary to perform the operation without an anæsthetic; but now a still more serious difficulty presented itself, as the patient could not remain in the recumbent position longer than a few seconds, when he jumped up, grasping his throat, and gasping for air. Nothing was left to be done but to complete the laying bare of the trachea and cricoid cartilage while he was kept in the sitting posture; and here I was frequently interrupted, as he was not able to bear for any length of time the least pressure on the larynx or trachea, such as was unavoidable in keeping the cut structures open by means of blunt hooks. The most serious difficulty was the hemorrhage, the blood oozing constantly out of the

cut structures. No large vessel had been divided; the thyroid veins had been carefully drawn aside with blunt tools; but in consequence of the great venous stasis, caused by the asphyxiated condition of the patient, the hemorrhage could not be arrested. After having tried in vain pressure and different styptics, I was obliged to open the cricoid cartilage and several rings of the trachea amidst considerable bleeding, and consequently the aspiration of blood by the patient was unavoidable. There now followed a fearful struggle for life, which I believe to have lasted for from two to three minutes; but the patient succeeded in coughing up and expectorating through the canula the blood he had drawn in, and, as soon as a more plentiful supply of air had begun to influence the circulation, the hemorrhage became insignificant, and gradually ceased altogether.

I should here mention that efforts had been made to suck out the blood by means of a flexible catheter, but without any success. And here is the place to express my conviction—which is shared by the physicians assisting me—that had this patient been under the influence of an anæsthetic while his trachea was being opened, he would have been doomed to death, as he would not have been able to expectorate the blood he had drawn in if his perceptive centres had been kept blunted by an anæsthetic.

Led by the experience of the case just related, and by the fact that at least two cases have come to the writer's notice where tracheotomy performed on children for croup has terminated fatally, under the hands of the operators, by the aspiration of blood into the lungs, and while the children were under the influence of ether, I would suggest for consideration whether it would not be better to use an anæsthetic to facilitate the laying bare of the trachea only, and then to allow the patient to recover from the influence of the anæsthetic sufficiently before the trachea is opened, that he may be able to make voluntary exertions for the expectoration of the blood which, in most operations done under the pressure of severe dyspnœa, will unavoidably be sucked in.

The relief to Mr. M. from the operation was great, as half an hour after the introduction of the canula his respirations had sunk from thirty-five to twenty-two per minute. He was now able to rest in the recumbent position, and passed the following night in bed for the first time in a week. Upon my questioning him, the following morning, as to how he felt, he wrote upon a slate, "I feel very well, only the cough troubles me." By means of small doses of morphia his cough was relieved, and under the use of good nourishment and tonics his general condition has so much improved that he is already able to sit up all day, giving ground for the hope that he will soon be able to take exercise in the open air, and that his life may yet be considerably prolonged by the operation.

At the date of writing this, nearly four weeks have elapsed since the performance of the operation, and during this time I have made a laryngoscopic examination at least once a week. The first two of these examinations showed the glottis to be in the same state of stenosis as before, but in the last two examinations a change was found, consisting in the remaining open of a triangular space in the posterior third of the glottis, pointing to an extension of paralysis to the arytenoidei muscles.

Although the etiology of the bilateral paralysis of the glottis-openers in my case must remain somewhat doubtful, I hope most of my readers will agree with me in supposing that the most probable cause in this case has been a perichondritis of the cricoid cartilage, caused by tubercular ulceration of the larynx. Therefore the paralysis must have been more of a *myopathic* than of a neuropathic nature. How long this paralysis will last, and consequently how long my patient will be compelled to wear the canula in his trachea, it is impossible to tell at present. The use of electricity, which in cases of neuropathic origin has effected a cure (Ziemssen), seems to me inadmissible as long as ulceration in the larynx is suspected.

Happily, the only inconvenience which my patient has to suffer from the presence of the opening in his trachea is the hinderance to speech, and this he temporarily obviates by closing the opening of the canula with his thumb, which enables him to talk in an audible though very hoarse voice.

854 North Fifth Street, Philadelphia.

TWO CASES OF COAL-GAS POISONING—ONE FATAL, THE OTHER TERMINATING IN RECOVERY.

BY J. M. ANDERS, M.D.

ABOUT 6 P.M. on the evening of February 14, 1880, I was summoned in great haste to the residence of Dr. R., of Philadelphia. On my arrival one of the

neighbors present informed me that the doctor and his servant-girl were both found on the floor, the girl in the dining-room and the doctor in his bedchamber. On reaching the doctor's bedchamber I found my friend Dr. Loeling already in attendance. Dr. Loeling and myself concurred in the opinion that we had to deal with coal-gas poisoning, which I shall hereafter attempt to prove. According to my note-book, the symptoms in the doctor's case were as follows:

Countenance excessively pale, slightly livid; general surface of body cool, and extremities quite cold to the touch; skin bedewed with moisture. The patient was frothing freely at the mouth. The eyes had lost their natural brilliancy, cornea looked dull and opaque,—almost as in death; pupil very slightly contracted. There were slight convulsive movements when we first saw him, but they quickly gave place to complete insensibility. Respiration was somewhat noisy and slow, the rate being about eight per minute, and it was also very superficial. Pulse almost imperceptible, and so rapid that the rate could not be noted. Dr. Loeling remarked that when he arrived the doctor was absolutely pulseless. The fresh air which had been supplied and other efforts at resuscitation had already caused a slight improvement in his circulation. There was no vomiting, but occasionally slight retchings. When auscultated later, after decided improvement, large moist râles were heard over the front of the chest, with feeble respiratory murmurs, indicating a congested state of the lungs.

The treatment consisted chiefly in the sedulous practice of artificial respiration; the admission of fresh air; application of cold to the head, sinapisms to the extremities and epigastrium, and hot bottles to the sides of the chest and the extremities. In fifteen minutes improvement was quite apparent. The breathing had increased in rate and fulness. The pulse had fallen to 120 per minute, but it was still very feeble.

At 7.30 P.M., about one hour after treatment was begun, he could be aroused to consciousness without much difficulty, and he answered questions rationally. A few minutes later he asked to be left alone, as he wished to rest. Respiration was now about natural; frothing at the mouth had ceased; pulse about 84 per minute, but weak. Our patient being now in good condition and out of all danger, we abandoned all medication and left him, comfortable though considerably exhausted. Meanwhile, the servant-girl down-stairs, whose double misfortune it was to be first poisoned with the gas and then to fall into the hands of a homœopathic savant, had died. This patient was not seen by me during life. The treatment employed in her case is not known to the writer, but some non-professional persons present stated that medicines of some kind had been administered. It will have been observed that the doctor's case was treated without the exhibition of any drugs.

I made a momentary inspection of the girl's body immediately after death. There was marked pallor of countenance, but face placid; eyes prominent, pupils somewhat dilated; no livid spots observed at the time.

The important question as to the cause of illness of these two persons—serious in the first case and fatal in the other—is next to be discussed. When Dr. Loeling entered the house there was quite a noticeable smell of coal-gas, and when I arrived the peculiar smell of this gas was still perceptible, notwithstanding the free ventilation in the mean time. It should be mentioned in this connection that Dr. Loeling and myself afterwards decided to inspect the furnace, and as the door leading from the kitchen to the cellar was opened a current of air strongly impregnated with coal-gas was encountered. We concluded it would be dangerous to life to descend, and ordered the cellar to be ventilated. An examination of the furnace a few days later showed it to be in pretty good condition, and, searching for the cause of the penetration of the large amount of gas, it was found that there was a large proportion of dirt in the coal used, the supply having run low; also that the damper, which is situated (as is the case with most old-fashioned furnaces) in the flue above the furnace, had been improperly arranged, so that it prevented the escape of the gas by the proper channel, and that the door of the heater had been left open.

Now, all these conditions are highly favorable to the generation of coal-gas, as well as its escape into the cellar and thence through the house. In addition to this strong presumptive evidence that coal-gas was the *materies morbi*, we have equally strong corroborative evidence in the symptoms, they having been those described as belonging to poisoning from this noxious gas, viz., frothing at the mouth, signs of congestion of the lungs, a convulsive tendency followed by complete insensibility, and a rapidly downward progress towards a fatal termination, as shown by nervous prostration, flagging circulation, and absence of caloric. The symptoms in these cases do not correspond with those of poisoning by any drug or known chemical substance except some

noxious gas, and there was entire absence of evidence pointing to any other poison, though the bystanders and the public, as is so frequently the case under such circumstances, got a wrong impression, and rapidly circulated the rumor that it was criminal poisoning.

The speedy recovery of our patient, Dr. R., after so narrowly escaping an untimely grave, is also confirmatory. The result of the coroner's inquest over the body of the girl may also be adduced as evidence in support of our opinion, which was to the effect that the girl came to her death from "accidental coal-gas poisoning." An analysis of the contents of her stomach made by an expert chemist revealed no poisonous substance whatever. It should be stated that the girl had a tumor of the brain (the nature of which, so far as I know, was not determined), and this circumstance may have modified the action of the poison in her case. The persons stricken down had taken no food for at least four hours previous to the onset of the symptoms, a fact which would militate strongly against the idea of criminal poisoning.

Now, as no evidence of drug-poisoning appears, and as acute disease is out of the question, the writer feels justified in assuming that the correctness of the diagnosis is established.

TRANSLATIONS.

ESMARCH ON BLOODLESS OPERATIONS.—At the recent meeting of the Congress of German Surgeons (*Cbl. f. Chir.*, No. 20, 1880), Professor Esmarch returned to a discussion of his method of bloodless operations first brought before the Society seven years ago. This method is still condemned by many distinguished surgeons on account of the parenchymatous bleeding which sometimes ensues after removal of the constricting tube. Since many modifications of his method have been devised with a view to preventing this bleeding, which nevertheless have not attained that object, Esmarch has thought it desirable that he should himself describe his present method of operating, by which parenchymatous hemorrhage is entirely avoided. He describes his procedure in amputations, resections, and necrotomies. After the amputation has been performed bloodlessly, and before the constricting tube is removed, all the vessels are carefully tied, and the wound closed by catgut in a furrier's stitch. Drainage-tubes are placed in position, a permanent compressing dressing is applied, and the stump secured in a vertical position; not until these preliminaries have been attended to is the compression-tube loosened. The patient being put to bed, the stump is retained in a vertical position for half an hour longer. In twelve amputations performed with these precautions, nine of which were in the lower part of the thigh, no hemorrhage occurred, and in most of them the first dressing remained in place until the fourteenth day. When removed at the end of that period, only a thin linear scar remained.

The procedure in resections is essentially the same. In fifty-six cases no death occurred, nor even hemorrhage. In thirty-three cases the continuous dressing was employed, being usually kept on three or four weeks.

In one hundred and forty-eight necrotomies treated in the manner described, the dressing had to be removed in six cases on account of hemorrhage. Small patches of gangrene of the skin also appeared in some cases. Since Easter, 1879, Esmarch has given up the use of tampons after removing sequestra, substituting the sewing up of the skin over the cavity after careful disinfection, and the introduction of a drainage-tube, the compressing gum tube being kept in place till all is completed. In twelve cases thus treated no hemorrhage followed, the wound remained aseptic, and indeed in several cases healed by first intention.

Finally, Esmarch has obtained equally good results by similar procedure in other operations, as removal of tumors, although in some localities, as about the shoulder and hip, bloodlessness is difficult to attain.

In the discussion following the reading of this paper, a number of distinguished surgeons expressed themselves as to the high value of Esmarch's procedure. With regard to the use of hot-water irrigation considerable diversity of opinion existed: some surgeons had found it answer all expectations, while in the hands of others it appeared to have failed entirely.

REPAIR OF EXSECTED FRAGMENTS OF NERVES, WITH RESTORATION OF FUNCTION.—At the recent Congress of German

Surgeons (*Cbl. f. Chir.*, No. 20, 1880), Gluck, of Berlin, read a paper on this subject based upon a long series of experiments upon animals, and going to show that plastic operations on the larger nerves can be undertaken with success. Parts of two neighboring nerves have been split off and united crosswise with each other; two entire branches have been cut through and then joined crosswise; and recently neuroplastic operations have been undertaken with success. Gluck excised from the ischiatic nerve of a hen a piece two centimetres in length, and then, excising a somewhat smaller piece from the ischiatic of a rabbit, sewed it in the break, so as to take the place of the lost piece of nerve in the hen. Eleven days after the operation the wound, which had healed by first intention, was opened, and the implanted piece of nerve was found firmly united. When the ischiatic was pinched at a point above the place of operation, the muscles supplied by the nerve were moved to contraction. Central nervous conduction through the foreign piece of nerve was also established. A series of similar experiments showed that the species of animal from whence the foreign nerve was taken made no difference, nor did reversing the direction of the foreign piece of nerve make any difference. It was found essential to the success of the experiments that the wound made should heal by first intention, so that the newly-formed substance should not be more than a millimetre in thickness. Electrical conduction does not appear to be established so early as conduction of painful sensation or of pinching. Gluck thinks that the fibres responding to this excitation do not become regenerated so rapidly as the others.

THE HIGH OPERATION IN STONE.—Petersen, of Kiel (Congress of German Surgeons, *Cbl. f. Chir.*, No. 20, 1880), regards the high operation as the operation of the future. It is to be preferred decidedly to the lateral operation, and is at least equal to the median, since two evils are avoided,—urinary infiltration with subsequent suppuration, and injury to the peritoneum.

In regard to the first complication, suture of the bladder and antiseptic precautions, together with the simultaneous emptying of the bladder by the siphon, guard against this, while injury to the peritoneum may be avoided by inflating the bladder and the large intestine, so that the prevesical fold of the peritoneum is carried up with the bladder high above the pubis. An investigation on ten cases in the laboratory showed this to be the case, and also that the peritoneum rose more readily in fat persons. For every 600 cm. of fluid injected, the peritoneum rises 65 mm. higher above the symphysis pubis.

SOAP AS AN EXCIPIENT FOR MEDICINAL APPLICATIONS.—M. Ceresoli, a pharmaceutist of Padua (*La France Méd.*, p. 283, 1880), objects to fatty materials as excipients for medicines intended for external use, on the ground that they impede the functions of the skin and prevent absorption as well as transpiration. In addition, the fact that fatty matters become so speedily rancid that many substances, as iodide of potassium, cannot be made up into ointments without decomposition, shows that some other vehicle is demanded.

To be sure, glycerole of starch and cosmoline are only slightly alterable, but M. Ceresoli considers his formula as superior to either of these. It consists of a solution, made with heat, of ninety-six grammes of soap in eight hundred grammes of 95° alcohol, which, on cooling, jellies. It may be said, however, of this preparation that, although an elegant one for superficial applications, it is likely to fail when absorption of medicinal substances with the skin is desired, since fatty matters mix better with the sebaceous secretions of the skin than any other preparations likely to be used as vehicles.

A SUBSTITUTE FOR COD-LIVER OIL.—In the case of children who refuse absolutely to take cod-liver oil, Dr. Lamarude recommends the following formula:

℞ Glycerinæ, ʒx;
Tinct. iodini, ♏xxx;
Potassii iodidi, gr. ss.—M.

Sig.—A dessertspoonful a quarter of an hour before each meal.

Under the use of this remedy the appetite returns, and constipation, when it exists, ceases absolutely. In the case of delicate individuals this formula may be modified as follows:

℞ Glycerinæ, ʒviii;
Syr. rubi, ʒxiv;
Tinct. iodini, ♏xxx;
Potassii iodid., gr. ss.—M.

(*La France Méd.*, 1880, p. 279.)

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JUNE 19, 1880.

EDITORIAL.

THE AMERICAN MEDICAL ASSOCIATION.

THE American Medical Association certainly is a remarkable body, and the last meeting at New York certainly was, in many respects, a red-letter day in its experience. It is also plain that the value of these annual meetings as an advertising medium is beginning to be perceived both within and without the profession. The recognition of their importance by certain New York business firms was most gratifying, and when to such clear perception is united the proverbial enterprise of New York, it is no wonder that the great body gathered together stares and admires, and its members scatter to tell how the convention was bought out and pampered by the nabobs of trade.

Probably to none is this more gratifying than to the editorial staff of this journal. We are especially delighted when the American Medical Association can be given a new usefulness; and it was a proud day when we could see American enterprise bearing this august body in triumph as a trophy of its advertising genius,—belling it, as it were, covering it over with placards, and driving it through the streets of New York and the columns of a thousand newspapers.

If Dame Rumor be not uncommonly untruthful, there was a less open exhibition of canniness, which, though it may not easily be paralleled, may be heartily admired. It is asserted that a member of the Committee of Arrangements rented a large portion of the available space so that he might secure room to sublet to the business firms, which, like the foolish virgins, came late, but, unlike the foolish virgins, had an overplus of oil in their—pockets.

It is not, however, solely to commend what has been done, but also to benefit our professional readers, that we have taken pen in hand. We want all our patrons to be upon the level of the shrewdest, and therefore gather up and dispense the latest improvements of the art of success as well as of medicine. It is notably well for John Jones, chiropodist, to have it telegraphed that he read a paper on a highly original, absolutely new, and always successful method of treating incurved toe-nails; judging from the number of titles telegraphed at the expense of the Associated Press, this fact is sufficiently appreciated by the general profession; but certain individuals, whose professional obscurity is enlightened by a most rare advertising acuteness, have discovered a better thing than this: it is to see the special reporter—let us say of the *New York Herald*, or the *Chicago Times*, or the *Philadelphia Ledger*. Thus it cometh to pass that after the bare announcement that Professor Sayre, or Jewell, or Pepper read a paper entitled so-and-so, appears a long analysis of the extraordinary article read, amidst great applause, by Dr. Ignotus.

On, then, to Richmond next year; and if we can learn anything further in this line which shall benefit our patrons, we will be sure to inform them, for the race seems to be to the knowing.

IT is a matter of sincere congratulation that the manufacturers of bogus diplomas seem in a fair way to get their deserts in this world as well as the next. The head of them all is at this moment enjoying the stifling atmosphere of Moyamensing prison, and the lower deities of the infernal circle are under arrest. As the details of the measures adopted are very fully reported in all the daily newspapers, we shall not occupy space with their repetition. The *Record* newspaper seems

to have been the chief engine of destruction, and has seemingly accomplished that which our medical colleges ought to have done long ago. It is true there were lions in the way,—high authorities seemingly determined to protect the scoundrels; influences guarding them, powerful and subtle. This affords some excuse; but a few hundred dollars, with a grim, energetic determination that would know no failure, would have sufficed long since.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN MEDICAL ASSOCIATION.

IF the presence of over twelve hundred delegates, plus a large number of members by invitation, be all that is essential to secure a satisfactory meeting, then the thirty-first annual session of the American Medical Association will be set down in the annals as one of the most successful ever held by this body; if the convenience and comfort of those in attendance upon the meeting and the high scientific standard of the communications presented be considered in the calculation, it is not improper to declare that meetings have previously been held at which these objects were better attained.

The first inconvenience was experienced in registration; the quarters provided by the Committee of Arrangements were altogether inadequate. Delegates were crowded into a small, suffocating room, where they were obliged to remain for over two hours before they could obtain their credentials. Some of the members were thus kept from attendance upon the sessions, where their duty required them to be; many, indeed, were not registered until the last day, and consequently were debarred from voting and from attending the entertainments. The quarters first provided for registration were in a small store on Twenty-third Street, and in a remote corner of a room the remainder of which had been economically rented out to about a dozen different firms of pharmacists, publishers, and others. At every step the delegate was accosted by the representatives of drugs, books, medicated soaps, sphygmographs, cosmoline, lactopeptin, extract of malt, surgical instruments, "Ziemssen's Cyclopædia," bromide of ethyl, mineral waters, carbolated baby-powder, liquefied nitrous oxide, patent syringes, with specula and pessaries *ad libitum*. The error was in counting literally without the host, for the room was comfortably full before the delegates arrived; as soon as one delegate entered the apartment was overcrowded. The Committee of Arrangements should have given this entire room for registration purposes alone. As it was, the secretary, treasurer, and corps of assistants were obliged to leave this room on the first day, as it became so hot and suffocating as to resemble a modern Black Hole of Calcutta.

The second error was in allowing the drug men and one publishing firm, in their business capacity (and for advertising purposes), to take the Association to the theatre and on a steamboat excursion.* It was *infra dignitate* on the part of the medical profession in New York to offer, and on the part of the American Medical Association to accept, such questionable hospitality. The members who are in the habit of bringing ladies with them also had reason to feel slighted by the information that, at the private receptions given to the Association by Mayor Cooper and August Belmont, the ladies were not expected. Several lady delegates, members of the Association, considered this as a personal matter, and, to appease them, Dr. Mary Putnam Jacobi especially invited them to a tea-party at her own residence upon the same evening. They were not so treated at Buffalo or at Atlanta.

In the third place, the programme, instead of being placed in the hands of each member on the first day, was printed in daily instalments. The consequence was that a man could not learn until noon whether he was to read a paper in the afternoon or not; and, in fact, on the last day no programme whatever was distributed. It is understood that the Committee of Arrangements were overburdened with work, and were expected to provide for the reading of about two hundred papers in three afternoons. It is true that they changed the hour of meeting of the sections from three o'clock to two o'clock P.M., and created a temporary section for diseases of children, in order to dispose of this superabundance; but truth also compels the admission that for social comfort and thorough satisfaction this New York meeting was not a brilliant success, judging, at least, from a provincial stand-point.

BUSINESS SESSIONS.

On Tuesday, June 1, the Association was called to order in the Hall of the Young Men's Christian Association, Twenty-third and Fourth Avenue, New York City, and the Thirty-First Annual Session was opened by prayer offered by the Rev. W. F. Morgan, D.D. Dr. T. Gaillard Thomas delivered a very pleasing and eloquent address of welcome. Dr. Lewis A. Sayre, President of the Association, delivered the annual address, in which he traced the good influence flowing from the establishment of this body of repre-

* Of course the editors are not responsible for the sentiments of the correspondent: our approbation of this course is fully expressed in the editorial column.

sentative physicians, and reviewed the debt of the world to American physicians and surgeons, in reply to Sydney Smith's famous taunt. He next considered the metric system and recommended its general adoption, and in conclusion strongly urged the substitution of a periodical publication for the transactions in their present form.

On motion, a committee was appointed to consider the recommendations in the presidential address. The chair appointed to serve in this capacity Drs. S. E. Chaille, Louisiana; S. D. Gross, Pennsylvania; J. S. Weatherly, Alabama; J. R. Bronson, Massachusetts; and W. R. Gillette, New York.

Dr. Sayre having retired, Dr. R. Beverly Cole, of San Francisco, First Vice-President, occupied the chair for the remainder of the morning session.

Professor S. D. Gross announced in feeling terms the death of Dr. Charles H. Sayre, and offered a resolution of sympathy and condolence with the President, and through him to his family, in their sad bereavement. This was unanimously adopted by a rising vote.

The Committee on Prize Essays made no award, only one essay being presented.

An appropriation of $200 was made for expenses of Committee upon Meteorology and Ozone, upon recommendation contained in a letter from Dr. N. S. Davis.

An emendation on Prize Essays was adopted on the second day, by which four prizes are to be offered, of $250 each, the chairmen in the different sections appointing committees for the selection of subjects and for awards. The amendment reads as follows:

"*a.* There shall be four annual prizes of two hundred and fifty dollars each, which shall be awarded at the close of the second year after announcement, as hereinafter explained, for strictly original contributions to medical and surgical progress.

"*b.* It shall be the duty of the chairman of each of the following four sections—1. Practical Medicine, Materia Medica, and Physiology; 2. Obstetrics and Diseases of Women and Children; 3. Surgery and Anatomy; 4. State Medicine and Public Hygiene—to appoint annually, before the adjournment of the meeting of the Association, three members of ability and good judgment, who shall constitute a Committee of Selection, and who shall, within thirty days thereafter, select and publicly announce, for competitive investigation and report, a subject belonging to one or other of the branches of medicine included in the title of the section.

"*c.* It shall also be the duty of the chairman of each of the sections mentioned to appoint annually a Committee of Award, consisting of three experts, who shall carefully examine the essays offered for competition, and if any one shall be found worthy of the prize as a substantial contribution to medical knowledge, to recommend the same to the Association.

"*d.* All essays placed by their authors for competition shall be in the hands of the chairmen of the respective committees of award on or before the first day of January preceding the meeting of the Association at which the reports of the committees are required to be made.

"*e.* All prize essays shall be considered as the property of the Association.

"*f.* The names of the authors of the competing essays shall be kept secret from the committees by such means as the latter may provide.

"*g.* Membership in either of the two committees shall not debar from membership in the other, nor shall membership in the Committee of Selection exclude a member from the privilege of offering a competing essay."

On motion of Dr. Bronson, of Massachusetts, a committee of five was appointed to consider the practicability of establishing an Association journal (such as the *British Medical Journal*), as recommended in the President's address. Drs. W. W. Dawson, Ohio; J. R. Bronson, Massachusetts; W. H. Pancoast, Pennsylvania; N. C. Husted, New York; and James S. Green, of Elizabeth, N.J., were named by the chair.

Dr. J. S. Billings, of Washington, reported that the first volume of the Catalogue of the National Library will be published in July, 1880, and the second about July, 1881.

The following amendments, proposed by Dr. John H. Rauch, to be made to the Constitution, were agreed to and ordered to be inserted:

Article II., second paragraph, after "army and navy," insert "and the Marine Hospital Service of the United States."

Article II., fourth paragraph, at the end, insert "the Marine Hospital Service of the United States shall be entitled to one delegate."

The following recommendations of the Metric Executive Committee were adopted:

(1.) Recommending the teaching and practice of the metric system in medical colleges, clinics, and dispensaries.

(2.) Charging the Metric Executive Committee to report annually the institutions which do or do not teach the metric system.

(3.) Authorizing said committee to enter into communication with the Metric Committee of the British Medical Association in order to concert such plans as may render the use of the metric system simultaneous and uniform in both countries.

Dr. W. M. Beach offered a resolution calling for a committee whose duty it should be to endeavor to secure for the medical staff of the army and navy equal social recognition with like grades in other departments of the service.

An anonymous charge against the delegates from the United States Navy having been offered, it was not entertained by the Judicial

Council; although, had it not been for a vigorous protest from Dr. Gihon, it would have succeeded in keeping them out until the last day of the session.

The following report from the Nominating Committee was unanimously adopted, and the following-named were declared elected:

OFFICERS FOR 1881.

"For President.—John T. Hodgen, M.D., of St. Louis, Mo.

"For Vice-Presidents.—1st, W. H. Anderson, M.D., of Mobile, Ala. 2d, Levi G. Hill, of New Hampshire. 3d, Henry T. Holton, of Vermont. 4th, H. Carpenter, of Oregon.

"For Permanent Secretary.—W. B. Atkinson, M.D., of Philadelphia, Pa.

"For Treasurer—R. J. Dunglison, M.D., of Philadelphia, Pa.

"For Librarian.—William Lee, M.D., of Washington, D.C.

"For Chairman of the Section on Practice of Medicine, Materia Medica, and Physiology.—Dr. Charles Denison, of Colorado. For Secretary.—Dr. T. A. Ashby, of Maryland.

"For Chairman of the Section on Surgery and Anatomy.—Dr. H. McGuire, of Richmond, Va. For Secretary.—Dr. D. A. Eve, of Tennessee.

"For Chairman of the Section on Obstetrics and Diseases of Women.—Dr. James R. Chadwick, of Boston, Mass. For Secretary.—Dr. J. Taber Johnson, of Washington, D.C.

"For Chairman of the Section on Medical Jurisprudence and State Medicine.—Dr. J. T. Reeve, of Wisconsin. For Secretary.—Dr. R. G. Young, of Arkansas.

"For Chairman of the Section on Ophthalmology, Otology, and Laryngology.—Dr. D. S. Reynolds, of Kentucky. For Secretary.—Dr. S. M. Burnett, of Washington, D.C.

"For Members of the Judicial Council, to fill vacancies.—Drs. J. K. Bartlett, of Wisconsin; F. Staples, of Minnesota; D. R. Wallace, of Texas; J. S. Billings, of U. S. Army; J. H. Warren, of Massachusetts; and A. T. Woodward, of Vermont."

The committee recommended that the next meeting of the Association be held in the city of Richmond, Va., on the first Tuesday in May, 1881.

As Chairman of Committee of Arrangements.—Dr. F. D. Cunningham, of Richmond, Va. Assistant Secretary.—Dr. J. G. Cabell, Va.

The committee further recommended that the Publication Committee, the Committee on Necrology, and the membership of the Section on Medical Jurisprudence, State Medicine, and Public Hygiene remain as now constituted, and in a supplemental report nominated Dr. Wm. Pepper, of Philadelphia, to fill the vacancy caused by the resignation of Dr. Chas. Denison, of Colorado, as chairman of the Section on Practice of Medicine, etc.

The President named the following:

Delegates to European Medical Societies.—Drs. R. Beverly Cole, California; Benjamin Lee, Pennsylvania; M. A. Pallen, New York; and J. D. Buckley and J. H. Warren, Massachusetts.

Delegates to Canada Medical Association.—Drs. C. N. Brush, Buffalo, N.Y.; James R. Leaming, New York; D. H. Goodwillie, New York; William Brodie, Michigan; and W. B. Ulrich, Chester, Pa.

The Librarian's Report was read, stating that the library contains 3258 volumes. Dr Lee asked for an appropriation of two hundred dollars for expenses, which was granted.

A number of communications were received on the final day,—one from Dr. Stillman, of Plainfield, N.J., resigning a patent-right to the Association (laid on the table); one from Dr. Frederick Horner, of Virginia, in regard to establishing a Committee on Benevolence (endorsed by the Association, and the chair directed to appoint the committee); and one presented by Dr. Lee, of Philadelphia, from the Philadelphia County Medical Society, calling attention to the prevalent abuse of medical charities, and recommending a searching investigation of applicants for relief. Referred to a committee consisting of Drs. B. H. Lee, H. G. Piffard, S. W. Gross, and J. W. Green.

Dr. Octerlony, Kentucky, moved that the practice of some medical editors of distributing their publications among the laity is considered reprehensible. Laid on the table.

Dr. Pratt, Michigan, moved that the Committee of Arrangements for the next meeting present a completed programme for the actual business of the meeting upon the first day of the session; also, that the proposed alteration in the Code of Ethics be set down for the second day's special order.

Dr. Hibberd, chairman of the Section on State Medicine, presented the following resolutions, which had been adopted by the section:

Whereas, The value of vital statistics depends upon their scientific accuracy as regards the etiology as well as the diagnosis of disease; therefore, be it *Resolved*, That this Association recommends that every medical school within its jurisdiction shall establish a Chair of Public or State Medicine as an essential part of its curriculum.

Resolved, That a general sanitary organization is a necessity of every enlightened commercial nation, and the service of the National Board of Health of the United States, since its organization, has been such as to impress us that both in its *personnel* and organization it is entitled to the confidence of the government and the people; and we join the American Public Health Association and the National Academy of Sciences in earnestly recommending to Congress that the suggestions and estimates of the board receive their legal sanction, believing that the money asked for

is necessary to the work of the board, and will be a most judicious expenditure of money.

Resolved, That this Association approves of the plans proposed by the superintendent of the tenth census for the collection of data with regard to the insane and idiots of the United States; and that it urges upon all physicians that they should aid in every suitable way the efforts of the Census Bureau to perfect these statistics in regard to idiots and the insane.

These resolutions were all adopted *nem. con.*

Dr. Keller, of Arkansas, renewed his amendment of last year in regard to restricting the Nominating Committee to the members in actual attendance upon the meeting in their choice of officers.

The treasurer announced a balance in the bank of $570.59. By resolution, the funds of the Association were directed to be deposited in the Farmers and Mechanics' Bank of Philadelphia, in the name of the treasurer of the Association.

On motion of Dr. H. O. Marcy, the usual appropriation was made to the secretary, which was amended by Dr. Pallen, of New York, by inserting "one thousand dollars," instead of the "usual amount," which was unanimously adopted.

The Publication Committee was directed to accept the offer of the Collins Printing House, as the lowest bidder for publishing the Transactions.

The following committee on Prize Essays was appointed by the President: S. E. Chaille, Louisiana; J. T. Cabell, Virginia; and A. N. Bell, New York.

Reports by the chairmen of the several sections—(1) On the Progress of Practice of Medicine, by Dr. J. S. Lynch, of Baltimore; (2) On Surgery and Anatomy, by W. T. Briggs, of Nashville, Tenn.; (3) On Medical Jurisprudence, State Medicine, and Public Hygiene, by James F. Hibberd, M.D., of Richmond, Ind.—were read before the general sessions, but want of space forbids their analysis. The following extract from Dr. Hibberd's address, however, touches upon a subject of special interest and importance:

"In medical jurisprudence the subject of hanging as the best mode of capital punishment has been especially agitated. Congress has asked the members of the National Academy of Sciences whether they know of a better way of killing a criminal, and it is expected that the Academy will speedily advise the world of more than one way in which the work can be done quietly, promptly, and unfailingly, without a tithe of the publicity, the offensiveness, or the demoralization to the living that is inseparable from the current method of hanging. It seems unaccountable that a refined and æsthetic people have so long stood by and witnessed the horrors of hanging without uttering a word of effective remonstrance. Not long since, a fugitive criminal was arrested in New Orleans, and, taking a little vial of prussic acid from his pocket, he swallowed its contents, and was dead in a few minutes without a struggle; and yet a Christian people has made no movement to insist on this method supplanting the hanging, notwithstanding that a broken rope and a second suspension are no unusual occurrences. Within the year an experimental scientist accidentally discharged the electricity of his battery into his own person, and instantly his life was extinct, without consciousness or the quiver of a muscle; and yet a humane and enlightened nation has not striven to substitute this for hanging, notwithstanding the victim of the hangman's noose is often a writhing spectacle in mid-air for twenty minutes.

"Upon the subject of insanity alone the year has produced eighty-one books and pamphlets, and three hundred and sixty-seven journal articles. There is just ground for this activity, for either the insane are increasing out of proportion to the general population, or we are more carefully seeking out the insane. However this may be, it is patent that the great army of lunatics is recruiting faster than death and recovery thin out the ranks, and we are on the threshold of the time when both physicians and statesmen must seriously inquire whether the State should or should not be the one to take cognizance of the lunatic's situation. The tendencies of our social life are questions of most serious import. If it be true that acquired conditions are transmissible from parent to child, the necessity of looking after the training of youth is vastly more pressing now than when it was esteemed that evil habits acquired by a wrong education of the young ended with the life of him who acquired the evil habit. We know enough now to realize that there is an urgent demand for fresher thoughts and broader views in regard to the exercise of some of the highest attributes of a civilized and Christian people, involving a review and a possible reconstruction of our aims, and a consequent reorganization of our labors in a field of Christian activity so sacred,—the protection, care, and preservation of those who are imperfect in body and mind."

ENTERTAINMENTS.

On the evening of June 1 a reception was tendered to the delegates, by the profession of New York, at the Academy of Music. On the 3d instant receptions to the male delegates were given at the houses of Mayor Cooper and August Belmont, and by Drs. Barker and Thomas at the Academy of Medicine. On Wednesday, the 2d of June, the Association witnessed a complimentary entertainment at Booth's theatre, when "Othello" was presented, Messrs. Reed & Carnrick, Scott & Bowne, and the New York Pharmacal Association having tendered this to the American

Medical Association. On Friday afternoon a large number of the members accepted the invitation of Messrs. Wm. Wood & Co. to attend an excursion to Coney Island and up the Hudson.

In consequence of the great number of the papers presented, an analysis of them will not be attempted. The following is a list of the

PAPERS READ AT THE MEETING:

Those marked * were read by title only.

Section I.—On the Practice of Medicine, Materia Medica, and Pharmacy.

Dr. J. S. Lynch, of Baltimore, Md., Chairman. Dr. W. C. Glasgow, St. Louis, Mo., Secretary.

1. On the Classification of Remedies, by Dr. William H. Thomson, New York.
2. A Case of Occlusion of One or More of the Cerebral Sinuses, by Dr. M. O'Hara, Philadelphia, Pa.
3. Sphygmograms, with Notes of Autopsies, by Dr. H. R. Hopkins, Buffalo, N.Y.
4. On the Use of Chrysophanic Acid in the Treatment of Skin Diseases, by Dr. Robert W. Taylor, New York.
5. Artificial Inflation as a Remedial Agent in Diseases of the Lungs,* by Dr. W. T. Gadbury, Yazoo City, Miss.
6. A Further Contribution to the Local Treatment of Pulmonary Cavities, by Dr. William Pepper, Philadelphia, Pa.
7. The Treatment of Scrofulous Diseases of the Skin, by Dr. J. V. Shoemaker, Philadelphia, Pa.
8. On Restorative Remedies, by Dr. J. R. Uhler, Baltimore, Md.
9. The Electrical Treatment of Exophthalmic Goître, by Dr. A. D. Rockwell, New York.
10. Artificial Inflation of the Lungs, by Dr. J. Solis Cohen, Philadelphia, Pa.
11. On the Use of Sulphur and its Compounds in Diseases of the Skin, by Dr. L. Duncan Bulkley, New York.
12. The Strong Galvanic Current in the Treatment of Sciatica, by Dr. V. P. Gibney, New York.
13. Hydrobromic Ether, by Dr. Laurence Turnbull, Philadelphia, Pa.
14. The Study of Special Nerve-Centres, by Dr. J. J. Caldwell, Baltimore, Md.
15. The Salisbury Method of Treating Consumption,* by Dr. E. Cutter, Boston, Mass.

Section II.—Surgery and Anatomy.

Dr. W. T. Briggs, Nashville, Tenn., Chairman. Dr. C. Powell Adams, Hastings, Minn., Secretary.

16. Spinal Extension: its Modes, Means, and Motives, by Dr. Benjamin Lee, Philadelphia, Pa.
17. Phimosis as a Cause of Nervous Symptoms, with Results of Operations, by Dr. George M. Beard, New York.
18. Section of the Infra-Orbital and Inferior Dental Nerves for Neuralgia, by Dr. John T. Hodgen, St. Louis, Mo.
19. Newly-Devised Orthopædic Appliances, including the Sector Splint, by Dr. Charles F. Stillman, Plainfield, N.J.
20. Certain Methods in Surgery, and Considerations of the Etiology and Pathology of White Swelling or Synovitis of the Joints, in Regard to the Practice of Extension in their Treatment, by Dr. William H. Pancoast, Philadelphia, Pa.
21. Compound Complicated Harelip, by Dr. James L. Little, New York.
22. A Case of Torticollis rapidly and completely cured by Open Division of the Sternal and Clavicular Ends of the Sterno-Cleido-Mastoid Muscle, followed by Elastic Traction, by Dr. A. C. Post, New York.
23. A New Ether-Inhaler, and a New Form of Transfusion Apparatus, by Dr. Joseph C. Hutchison, Brooklyn, N.Y.
24. On the Treatment of Abnormal Conditions of the Inferior Turbinated Bones, by Dr. D. H. Goodwillie, New York.
25. Apparatus for Inhaling Nitrous Oxide mixed with Air, by Dr. D. H. Goodwillie, New York.
26. Hip-Joint Disease, by Drs. De Forrest Willard and E. O. Shakespeare, Philadelphia, Pa.
27. On Tapping of the Pericardial Sac, by Dr. John B. Roberts, Philadelphia, Pa.
28. Thoracentesis, by Dr. C. A. Leale, New York.
29. Cystotomy for Cystitis in the Male, by Dr. Robert F. Weir, New York.
30. Skin-Grafting, with Photographs, by Dr. Laurence Turnbull, Philadelphia, Pa.
31. A New Inhaler for Anæsthetics,* by Dr. D. M. Barr, Philadelphia, Pa.
32. Laparotomy and Colotomy, with Formation of Artificial Anus for Intestinal Obstruction, by Dr. W. A. Byrd, Quincy, Ill.
33. A New Appliance for Club-Foot, by Dr. W. Doyle, Syracuse, N.Y.
34. The Pathology and Treatment of Syphilis, by Dr. F. N. Otis, New York.
35. The Development of the Osseous Callus, by Dr. H. O. Marcy, Mass.
36. Lupus, by Dr. H. G. Piffard, New York.
37. The Treatment of Syphilis at the Beginning and at the End of the Nineteenth Century, by Dr. Charles R. Drysdale, London, England.
38. The Elastic Bandage, by Dr. James Martin, Boston.
39. On the Radical Cure of Inflammation by Ligation of the Vessels of Supply, by Dr. H. F. Campbell, Georgia.
40. A Method of Treating Spinal Disease,* by Dr. E. H. Coover, Harrisburg, Pa.
41. On the Treatment of Fractures, by Dr. W. D. Hooper, Virginia.
42. Treatment of Fractures of the Long Bones involving the Joints,* by Dr. James S. Green, New Jersey.

43. On the Present Standing of the Doctrine of Inflammation,* by Dr. C. Heitzmann, New York.

Section III.—On Obstetrics and Diseases of Women.

Dr. G. M. B. Maughs, St. Louis, Mo., Chairman.

Dr. Robert Battey, Rome, Ga., Secretary.

44. Battey's Operation in Epileptoid Affections, by Dr. J. M. Sims, New York.

45. On the True Import of Oöphorectomy, or Spaying, for Reflex Disease, more particularly in Epilepsy, Hystero-Epilepsy, or Catalepsy, by Dr. M. A. Pallen, New York.

46. Management of the Third Stage of Abortion, by Dr J. Taber Johnson, Washington, D.C.

47. Gastro-Hysterectomy, being Remarks on and Exhibition of a Full-Term Uterus removed by Laparotomy, by Dr. Isaac E. Taylor, New York.

48. A New Uterine Dilator, by Dr. H. O. Marcy, Mass.

49. Clinical Contributions to the Subject of Removal of the Uterus, in Whole or in Part, by the Extirpation of Tumors connected with that Organ, by Dr. T. G. Thomas, New York.

50. The Treatment of Fibroids of the Uterus by Dry Earth, by Dr. Addinell Hewson, Philadelphia, Pa.

51. Clinical Report on a Modified Operation for Cystocele, by Dr. B. F. Dawson, New York.

52. Still-Birth: Resuscitation after Two Hours and Five Minutes, by Dr. Robert Battey, Rome, Ga.

53. Rest after Delivery—Treatment of Peritonitis, by Dr. R. Tauszky, New York.

54. Remarks on Sponge Tents, by Dr. R. Beverly Cole, California.

55. A Universal Catheter, by Dr. Robert Battey, Georgia.

Section IV.—On Medical Jurisprudence, Chemistry, Psychology; State, Medical, and Public Hygiene.

Dr. James F. Hibberd, Richmond, Va., Chairman.

Dr. Thomas F. Wood, Wilmington, N.C., Secretary.

56. The Death-Rate of the Rich and Poor, by Dr. C. R. Drysdale, England.

57. The National Board of Health, by Dr. J. S. Billings, U.S.A., Washington, D.C.

58. The Relations of the Medical and Legal Professions to Criminal Abortion, by Dr. E. H. Parker, Poughkeepsie, N.Y.

59. Unsanitary Engineering and Architecture, by Dr. A. N. Bell, Garden City, N.Y.

60. The Temperature of Living-Rooms, by Dr. R. C. Kedzie, Michigan.

61. The Personal Factor in the Etiology of Preventable Disease, by Dr. A. C. Carroll, New York.

62. Hot-Air Bathing as a Means of Promoting Health and Preventing Disease, by Dr. E. C. Angell, N.Y.

63. Microscopical Sections from Cases of Diseases of the Brain and Spinal Cord, by Drs. Charles K. Mills and Carl Seiler, Philadelphia, Pa.

64. The Treatment of the Insane, by Dr. Charles W. Page, Connecticut.

65. Intervention of Physicians in Education (report of committee).

66. Establishment of National Sanitaria (report of committee).

67. The Criminal Use of Chloroform, by Dr. J. V. Quimby, New Jersey.

68. Thoughts regarding the Construction of Almshouses, by Dr. W. H. Lathrop, Massachusetts.

69. Suspected Poisoning, by Dr. G. Antisell, Washington, D.C.

70. Humane Societies, by Dr. W. F. Thomas, New York.

Section V.—On Ophthalmology, Otology, and Laryngology.

Dr. Laurence Turnbull, Philadelphia, Chairman.

Dr. Eugene Smith, Detroit, Secretary.

71. A Case of Syphilitic Stenosis of the Larynx, with Fibrous Adhesive Bands of the True Vocal Cords; Tracheotomy, Rupture of Bands, and Cure of the Stenosis by General and Local Treatment, by Dr. W. H. Daly, Pittsburg, Pa.

72. Remarks on the Lesions in the Larynx in Pulmonary Phthisis, by Dr. Carl Seiler, Philadelphia, Pa.

73. Tumors of the Lachrymal Gland, by Dr. H. Knapp, New York.

74. The Training of Idiotic Eyes, by Dr. Edward Seguin, New York.

75. The Therapeutic Value of the Galvano-Cautery in Diseases of the Naso-Pharynx, by Dr. W. H. Daly, Pittsburg, Pa.

76. The Refraction of Light by Asymmetrical Surfaces, by Dr. H. Knapp, New York.

77. On the Introduction of Liquids into Eustachian Tubes and Middle Ear, by Dr. S. S. Jones, Chicago.

78. On Wickersheimer's Preservative Fluid, by Dr. E. Gruening, New York.

79. Color-Blindness, by Dr. B. Joy Jeffries, Boston.

80. Variability of the Human Eye, by Dr. David Hunt, Boston.

81. The Probable Cause of Some Forms of Globus Hystericus, by Dr. Richard C. Brandeis, New York.

82. The Magnet for the Removal of Particles of Steel and Iron from the Eye, by Dr. E. Gruening, New York.

83. Perichondritis Auriculæ, by Dr. H. Knapp, New York.

84. On the Detection of the Presence and Location of Pieces of Steel and Iron in the Eye by the Indication of a Magnetic Needle, by Dr. T. R. Pooley, New York.

85. Ear Troubles, by Dr. S. D. Risley, Philadelphia, Pa.

86. Erectile Tumors of the Turbinated Bones, by Dr. D. H. Goodwillie, New York.

87. Primary Conjunctival Lupus, by Dr. E. S. Peck, New York.

88. Removal of Secretions from the Tympanic Cavity and Mastoid Cells,* by Dr. W. F. Holcombe, New York.

89. Causes and Relief of Tinnitus Aurium,* by Dr. W. F. Holcombe, New York.

90. A Treatment suggested for Subacute and Chronic Otitis Media,* by Dr. W. F. Holcombe, New York.

91. Observations upon Aural and Auditory Vertigo, with Cases,* by Dr. Laurence Turnbull, Philadelphia, Pa.

Section VI.—On Diseases of Children (*new section*).

Dr. S. C. Busey, of Washington, D. C., Chairman.

Dr. Frank Woodbury, Philadelphia, Pa., Secretary.

92. The Claims of Pædiatric Medicine (address), by Dr. A. Jacobi, New York.

93. Bright's Disease in Children caused by Malaria, by Dr. S. C. Busey, Washington, D.C.

94. Congenital Multiple Lymphectasia, by Dr. James S. Green, Elizabeth, N.J.

95. Congenital Atrophy of the Liver, by Dr. A. Jacobi, New York.

96. A Case of Supra-Pubic Lithotomy, by Dr. A. Jacobi, New York.

The chairmen of Sections I., II., and IV. also presented reports of progress in their special departments in their annual addresses, which were read at the morning sessions of the Association.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MARCH 25, 1880.

The PRESIDENT, DR. S. W. GROSS, in the chair.

Cystic giant-celled sarcoma of the head of the tibia. Presented by Dr. SAMUEL W. GROSS.

A SINGLE woman, æt. 20 years, presented herself at the out-patients' department of the Jefferson Medical College Hospital on the 24th of January, 1880, on account of a huge tumor of the upper epiphysis of the left tibia, of two years' duration. About three years previously she fell and struck her knee upon the cobble-stones; after which she experienced a sense of weakness in the joint, but did not discover a swelling until after the lapse of twelve months, when she observed a tumor, of the volume of a hen's egg, just below the lower border of the patella. For eighteen months its growth was so slow that its size had only doubled itself; but six months ago she again fell upon her knee, after which the tumor increased rapidly, and the subcutaneous veins began to enlarge. At times, when the weather was damp, she experienced sharp, shooting, or stinging pains, but, as a rule, she was free from suffering. There was some heat in the swelling; the skin was not changed in texture or color; the veins were as large as the little finger; there was some tenderness on manipulation; the consistence of the mass was firm and elastic, except at its outer side, where there was marked parchment-like crepitation. The leg could be flexed upon the thigh, but the power of extension was slight.

After amputation through the lower third of the thigh, by Dr. Levis, at the Pennsylvania Hospital, the head and upper portion of the shaft of the tibia were found to have been converted into a periosteo-osseous capsule, which was occupied by a firm mass, the centre of which was of a yellowish-white tint, while the peripheral portion, for an average width of an inch and a half, was of a dull red color and pervaded by cysts, some of which were an inch and a quarter in diameter and contained a citron-colored fluid. The tumor measured six inches and three-quarters in length by five inches in width, and was limited above by the articular cartilage, which was sound.

Minute examination of sections taken from the red portion of the mass disclosed an exquisite example of giant-celled sarcoma, and the commencing cystic changes could be readily followed through mucoid transformation of the multinucleated elements. The central portion of the growth had undergone advanced fatty metamorphosis.

Tumor of breast. Presented by DR. JOHN H. PACKARD. With report of microscopic examination of the same, by C. SEILER, M.D.

Susan C., æt. 50, unmarried, Irish, a large, well-developed woman, rather old-looking for her years, living comfortably as an upper servant in a wealthy family, noticed a tumor in her right breast some time last summer (1879). She does not recollect having ever sustained any injury to the part.

Becoming uneasy about it shortly before Christmas, she consulted her employer's physician, Dr. J. F. Meigs, who gave her a protective plaster and directed a tonic.

On the 12th of January she came to me by Dr. M.'s advice. The tumor had produced no visible alteration in the size or shape of the breast, but could be easily felt as a condensation and hardening of the part. It was not painful, or tender on pressure, but there was some "sticking" sensation in it after it had been handled. No alteration was discoverable either in the nipple or in the skin. Her general health was good in every respect. Menstruation regular.

I advised the continuance of the tonic, and the local application of a thin sheet of raw cotton, covered with oiled silk.

On the 29th of January the measurement of the diseased gland was eighteen inches, the tape being carried as accurately as possible around the largest vertical circumference. The sound one measured sixteen.

February 13, the tumor measured seventeen and a half inches, and February 27 only seventeen.

On the 26th she had noticed a slight discharge of bloody liquid from the nipple. This still continuing, on the 27th I examined it under the microscope, and found the following elements: blood-corpuscles in large numbers: some bodies resembling the colostrum-corpuscles of milk; fine oil-drops; a few masses looking like epithelial casts of the lactiferous tubes; some cells of irregular shape, with nuclei and nucleoli; a good many free nuclei were also noticed. Many of the nuclei contained two nucleoli.

Although the tumor had lessened in size, it had become decidedly harder and denser. There was no discoverable involvement of axillary or other lymphatic glands.

On the 19th of March I excised the tumor, with the entire breast, ether having been administered by Dr. A. V. Meigs, and Drs. J. F. Meigs and Jesse Williamson being present and assisting. The incisions were made obliquely, so as to bevel the edges of the skin, and the wound was accurately closed with three hare-lip sutures and adhesive plaster. Carbolized cerate was used as a dressing.

She had no pain afterwards, except some in the arm from the constrained position in which it was kept. On the third day, the pins being removed, the wound seemed to have united firmly throughout. On the fourth day she got up to have her bed made, and suffered only slight giddiness.

I would call attention to the effect of the oblique incisions, as enabling me to close the wound very accurately, excluding the air, and giving two broad surfaces for agglutination, thus promoting rapid union, and preventing the formation of pus even in the large cavity left by the removal of such a mass of tissue.

Dr. Seiler was kind enough to undertake the microscopic examination of the tumor, and to report his results:

"The tumor of the breast exhibits under the microscope large distended acini, separated from each other by narrow bands of connective tissue. The epithelial cells lining the acini are proliferating, so as to fill in many instances the entire lumen, while in others the cell-plugs are seen to have undergone cheesy degeneration. Frequently the cells are seen to have broken through the limiting membrane of the acini, and to advance in pegs into the connective tissue. Numerous depots of small-celled infiltration are observed in the connective tissue. From these appearances I would pronounce the tumor to be a carcinoma having undergone cystic caseous degeneration."

Warty growth pendent to uvula; no symptoms. Presented by Dr. S. D. RISLEY.

Mr. C. F. M., æt. 32, consulted me on March 4, 1880, for disease of his left ear. In the attempt to study the condition of the pharynx and orifice of the Eustachian tubes, the uvula was found greatly elongated and its extremity hidden from view below the base of the tongue. It was brought into view by a blunt hook, and a large papillomatous growth discovered pendent to its extremity, the uvula itself being drawn out to fully 3½ cm. in length, and correspondingly diminished in thickness. The growth itself was of a grayish-white color, and appeared macerated; it was 1 cm. in its broadest horizontal diameter, and 8 mm. in the vertical diameter. It presented the characteristic papillary divisions, which were clustered around the end of the uvula like the cauliflower around its stock, presenting posteriorly a hilus down which ran the greatly-distended blood-vessels. The bleeding after excision was very profuse. The accompanying sketch was made on wood by Dr. Lee, after the growth had been in dilute alcohol for several weeks. I at first supposed this specimen to be unique, but my attention was subsequently called to a very similar growth reported and figured *in situ* by Lennox Browne (*The Throat and its Diseases*, Philadelphia, 1878, Henry C. Lea). In his case very distressing symptoms were occasioned. In mine the patient was entirely ignorant of its presence, and had experienced no inconvenience from it,—not even a cough. He had a deep, hoarse voice, which very noticeably improved in tone during the two weeks he was under observation.

Dermoid cyst of left cornea. Presented by Dr. S. D. RISLEY.

A. R., æt. 18, consulted me, January 20, 1880, regarding a tumor on his left eye. The following history was given. His mother noticed, during very early infancy, a white spot, the size of a large pin's head, near the external limbus of the cornea, situated entirely on the sclerotica. It gradually increased in size as the child grew. It has never caused any pain or trouble of any kind, other than the defective vision.

Present State.—O. D. healthy; V=$\frac{6}{6}$. In O. S. deciphered Sn. c.c. at 1 M.

There is in O. S. a pinkish-white tumor five millimetres in height, eight millimetres in vertical diameter at the base, and one centimetre in its horizontal diameter. In shape it is a truncated cone. It is vascular at its base, and has four black hairs, the length of the cilia, growing from the top, with numerous finer, colorless ones, seen only with lens. The base horizontal line is situated half on the cornea, half on the sclerotica, and is two millimetres below the horizontal meridian of the cornea. The corneal side of the cone is

steeper than the scleral side, and the base more sharply defined. The cornea is hazy, one millimetre and a half around the base, and is lifted up above the surrounding cornea, which is elsewhere transparent. The iris reacts promptly, and the anterior chamber is perfect. The deeper media are transparent, and the fundus healthy.

The accompanying sketch very perfectly

represents the appearance of the growth, which is undoubtedly a dermoid cyst.

REVIEWS AND BOOK NOTICES.

HISTORY OF MEDICINE IN NEW JERSEY, AND OF ITS MEDICAL MEN. By STEPHEN WICKES, M.D. Mark R. Dennis & Co., Newark, N.J., 1879.

The time covered by this curious work is from the earliest settlement of the province up to the year 1800. The first part of the work, giving the general history of the subject, including a discussion of the pecuniary and social position of the profession in the early time, will, we think, most strongly attract the general reader; and yet we have lingered most pleasantly over the quaint biographies in the latter pages, many of which have, to us, the peculiar charm that hangs about a mediæval church-yard and holds the wanderer fast until each moss-covered tablet has been spelled out. Quaint bits of character, whose rugged growth was nurtured by the storms of revolution; fragments of medical practice still damp with the odor of mediæval grave-vaults; anecdotes of death, of toil, of battle, with that touch of humanity in them that makes the world akin, — these, strung together with a thread of personal history which binds them to men still living and known to us, fill page after page of this entertaining volume. We picked up the book supposing that it was a whited sepulchre full of dead men's bones, but, lo, the forms are vivified by the touch of a living pen.

PATHOGENETIC OUTLINES OF HOMŒOPATHIC DRUGS. By Dr. CARL HEINIGKE. Translated from the German by Dr. EMIL ZIETZE. Boericke & Tafel, 1880.

Few books have ever come under our editorial notice concerning which it has been so embarrassing a task to write as the present one. If we say that it is a condensed mass of asserted facts, very many of them false, others puerile, others true, all mixed and commingled into a hopeless jumble, we will be accused of being prejudiced; but, on the other hand, if we say anything diverse from this, we will be guilty of breaking the commandment, "Thou shalt not bear false witness." On the third page of the text, at which the book first fell open, we read that the symptoms produced by aconite are "tumultuous and violent contractions of the heart; increased tension of the arterial vascular membranes; frequent, hard, and rigid pulse; more vigorous and irregular beating of the heart; spasmodic contraction of small arteries; violent febrile phenomena, with chills, heat, and perspiration; high bodily temperature," etc. To escape from our dilemma as to the true method of review, we will leave the above-given extract as a specimen of the wilful ignorance of its author, or of his scarcely more pardonable falsification.

GLEANINGS FROM EXCHANGES.

PATHOLOGY OF URTICARIA. — M. Vidal (*Lancet*, April 3, 1880; from *L'Union Médicale*) has published the results of the examination of a "wheal" excised during life from a patient suffering from urticaria. The superficial and deep net-work of vessels was found dilated and gorged with blood, without any alteration of their walls being discoverable. Both the blood-vessels and the lymphatic vessels were surrounded by leucocytes, which were also scattered through the whole thickness of the cutis, and massed together at certain points. A few were to be seen between the cells in the deepest layer of the epidermis. Here this structure was normal, but another piece of skin was excised from a wheal on which the epidermis had been raised in a vesicle. This vesicle contained a serous, albuminous liquid, and the débris of epithelial cells. In the middle layer the cells were vesicular, and those of the deeper layer granular. Leucocytes migrating among the cells in the deep layer of the epidermis were more numerous than in the other case.

M. Vidal remarks that from this pathological alteration we can see the nature of the morbid process. In a predisposed subject some internal or local cause excites the action of the vaso-motor nerves; this excitation is soon followed by contraction of the cutaneous capillaries, and this by their paresis and congestion, with retardation of the circulation. Hence, at the centre of the altered part there is migration of leucocytes and serous effusion, the acute œdema causing the pale prominence. A similar lesion—a sort of acute œdema—may be produced artificially by injecting into the skin a few drops of water. What becomes of the leucocytes which have wandered out? Are they resorbed, or are they carried towards the epidermic layer, as Biesiadecki suggests? It will be observed that this theory ignores any participation of the muscular fibres of the skin, which has been assumed to account for the limitation of the œdema and consequent prominence of the wheal,—a limitation which M. Vidal leaves unexplained.

GANGRENE OF THE LUNG—RECOVERY.—The *Lancet* of April 10 contains notes of the following case, which occurred under the care of Dr. Sturgis, at the Westminster Hospital. A man of twenty-seven, who had previously enjoyed good health, caught cold, with cough, pain in the left chest, with profuse expectoration and dyspnœa, which, during five weeks, became steadily worse. At the end of that time he was anæmic, weak and thin; his breath and sputa were of the characteristic odor of pulmonary gangrene. The sputa were frothy at the surface, but had a blackish-gray layer below. On percussion there was a patch of dulness over the left base behind, about three inches square, and, on auscultating over this patch, crepitation of medium character was heard during inspiration and expiration. The other parts of the lungs gave evidence of bronchitis. Dr. Sturgis diagnosed the case as gangrene of the lung, and ordered the patient to be placed in a complete atmosphere of carbolic-acid vapor. A tent was placed around the bed-head, and vapor of carbolic acid was passed into the tent. The strength of the solution was one per cent. The patient was kept in this atmosphere for five weeks; for the first fourteen days the cough and dyspnœa were no better, but the offensive odor of the expectoration disappeared, sputa still giving evidence of pulmonary break-down. During the remaining three weeks of treatment the symptoms gradually improved, and the patient became better and stronger and increased in weight. The patient was finally discharged in good health.

APOMORPHIA IN HYSTERIA.—Mr. James Allen, being called to a woman whom he found in a state of hysterical coma which had lasted several days, injected one-tenth of a grain of apomorphia subcutaneously; the patient in a few moments sat up, and was able to walk home with her friends.

MISCELLANY.

THE editor-in-chief of the *British Medical Journal* receives a salary of twenty-five hundred dollars a year, while the sub-editor receives eight hundred dollars.

WE have received, as one of the volumes of Wood's Standard Medical Library, a translation, by Dr. D. F. Lincoln, of the classical work by Professors Trousseau and Pidoux on "Therapeutics,"—a book which is such a masterpiece that it still affords very pleasant and useful reading to the practitioner, in spite of the fact that modern science has swept far away from its methods. It remains, like a noble home of the old régime, still beautiful and pleasant, and rich with the reminiscences of a bygone age.

CHLORAL! of blue blood the bluest,
Alcohol and Chlorine's daughter,
Youth and beauty that renewest,
Night's long watches making shorter.
Blithely raise a pæan choral
Round thy fount of blessings, Chloral!

Toss no more in vigils lengthy,
Sigh no more for daylight's peeping;
Sweet and soft falls thy nepenthe,
In its calm worn spirits steeping.
Truly "*Amor vincit omnia*,"
Chloral's love can cure *Insomnia!*

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MAY 30 TO JUNE 11, 1880.

VOLLUM, E. P., MAJOR AND SURGEON.—Having reported in person at these Headquarters, is assigned to duty at Fort Hamilton, New York Harbor. S. O. 84, Department of the East, June 1, 1880.

IRWIN, B. J. D., MAJOR AND SURGEON.—To be relieved from duty at Fort Meade, upon return to that Post of Assistant-Surgeon Brechemin, and then to report in person to the Commanding Officer, Fort Snelling, Minn., for duty as Post-Surgeon. S. O. 63, Department of Dakota, May 27, 1880.

HAPPERSETT, J. C. G., MAJOR AND SURGEON.—Granted leave of absence for three months, to take effect when relieved from duty in Department of the East. S. O. 118, A. G. O., May 28, 1880.

BARTHOLF, J. H., CAPTAIN AND ASSISTANT-SURGEON.—Now on leave of absence; relieved from duty in Department of California, and to report in person to Commanding General, Department of the Columbia, for assignment to duty. S. O. 123, A. G. O., June 4, 1880.

WEISEL, D., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for four months. S. O. 122, A. G. O., June 3, 1880.

BYRNE, C. B., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Johnston, N.C., relieving Assistant-Surgeon V. Havard, who will comply with S. O. 74, c. s., A. G. O., in his case. S. O. 65, Department of the South, June 1, 1880.

REED, WALTER, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for an extension of two months. S. O. 124, A. G. O., June 5, 1880.

HALL, WILLIAM R., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To proceed to Fort Hays, Kansas, and report to Major Noyes, Fourth Cavalry, for duty with troops ordered to New Mexico. S. O. 113, Department of the Missouri, May 26, 1880.

GRAY, WILLIAM W., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Point, Cal., and to return by steamer, on 31st instant, to his proper station, Vancouver Barracks, Wyo. T. S. O. 75, Division of the Pacific and Department of California, May 26, 1880.